

Politicising Technology and Technologising Politics

Nesta Devine

University of Waikato

ABSTRACT

Heidegger postulates that technology can be viewed as instrumental, or as political. I argue that to view technology as instrumental is to conceal the politics of its creation and existence, or to allow this to remain concealed. The specific nature of the technology reflects certain assumptions about the nature of relations between people and what should be facilitated. Moreover, as a result of the successful concealment of the politics of technology, that is, of the concealment of relations of power which are present in its conception and use, technology holds particular attraction to those who would conceal their politics under the guise of the technical and technology.

Reflection is the courage to make the truth of our own presuppositions and the realm of our own goals into the things that most deserve to be called in question.

(Heidegger, "The Age of the World Picture", 1977: 116)

Heidegger says that when we ask the question concerning technology we invite two answers: "Technology is a means to an end ... Technology is a human activity" (Heidegger, 1977a: 4). In this paper I argue that these answers have a complex relation to each other. The idea that technology can be merely "a means to an end" is to make the claim that technology can be created in such a way that it is without history, without politics, without ethical implications, whereas technology as "a human activity" assumes that it happens in a context which is political, social, and ethically laden. In privileging the first answer, we try to avoid the implications of the second. And, overwhelmingly the notions of technology circulating through politics and education have been of this first kind, a move which has the double advantage of providing an apparently politics-free answer to certain questions of funding, content, pedagogy, access, privilege; and at the same time answering political demands which have become embarrassing as to the relation between education and the economy, between the rhetoric of access and the reality of under employment, between the expectations of social and economic inclusion and the experience of exclusion. The promise of access, inclusion, opportunity through technological means satisfies demands which are political in the broad sense of the pressure on politicians to provide for the well-being of citizens, political in the narrower sense of the electoral need to provide for the well-being of tax payers (by keeping down the public taxfunded costs of education), and economic in terms of the pressure on politicians to provide for the continued supply of appropriately educated labour for business. The notion of 'technology', apparently related to electronic or mechanical instruments in education - 'hand tools' as Marx calls them (McLellan, 1977: 378), things controlled by people - can be seen to mask a *'techne'*, to use Foucault's term: a technique of government, a way of doing thing which is part of a particular political rationality that controls people.

In addition to all these potent reasons for continuing to think of education technology as apolitical there is a further reason, which is located in the neo-liberal notions of individualism and rationality. Given the assumption that rational individuals seek their own self-interest, the obligation of government is limited to the provision of an environment in which, technically, it is possible for individuals to do this. If education can be produced as a cheap instrument by which inclusion can be *offered* to all, then further failure to achieve inclusion can be constructed as failure *of the failed* to engage this opportunity. The precise nature of, or reason for, this failure is *politically* beside the point, although it may provide endless material for *educational* speculation and research. There is therefore a considerable amount to be gained, politically, by insisting on the non-political, the instrumental nature of education as a technology.

Concealed violence

To look thus at education and technology is, in Heidegger's words, to look into the danger, and see the potential growth of the "saving power" (Heidegger, 1977a: 33), but to glimpse the possibilities of a technology which is relocated in "human activity" is not in itself to overcome the dangers. Rather it is to start on a question of why technology has come to be seen as politically neutral, and to ask what un-neutral positions are thereby concealed.

To do this, one can start with Foucault (1976), who examines von Clausewitz's aphorism that "war is diplomacy by other means". Foucault argues that the aphorism can usefully be reversed: diplomacy, the civil relations between states, is *war* by other means, since it is always supported by the knowledge of both parties that one has the dominant position, or the means to defeat the other and therefore, in diplomatic engagement, that knowledge will always cast one in a position of greater power than the other. Foucault argues further, that civil relations within states are similarly constructed: laws represent the victory of one group of people over another, and are meant to sustain the relative advantage of those who have 'power'. Laws are sustained, legitimated violence (Foucault, 1976). The '*pax Romana*', like the later '*pax Britannica*' was achieved only by subordinating the values, traditions and legal systems of defeated peoples to those of the conquerors. That the conquered came to like them and insist on the 'universal' or 'logical' nature of the principles of Roman law does not alter the case.

I wish to argue that, in exactly the same way, technological constructs are sustained, legitimated violence. As in the case of law, the violence is subsumed in custom and practices: it is naturalised, accepted, part of day to day life, taken for granted, regarded as the essential environment in which normal relations exist, essential to the continued practice of good order, or in the case of technology, essential to the continued existence of civilised life, or essential to the continued health of 'the economy'.

Herbert Marcuse (1964) makes a very similar point, when he says that society has initially a choice between

historical alternatives which are determined by the inherited level of the material and intellectual culture. The choice itself results from the play of the dominant interests. It *anticipates* specific modes of transforming and utilizing man and nature and rejects other modes. But once the project has become operative ... It tends to become exclusive and to determine the development of the society as a whole (Marcuse, 1964: xvi).

Moreover, Marcuse points out that as time goes on, the element of political decision-making inherent in the choice of alternatives is forgotten:

In the medium of technology, culture, politics and the economy merge into an omnipresent system which swallows up or repulses all alternative ... Technological rationality has become political rationality (Marcuse, 1964: xvi).

Technology concealing power relations

Let me use two examples to illustrate the point. The first comes from the history of my own locality, the second from Heidegger's own work. Before the New Zealand civil war of the 1860s, Wiremu Tamihana Tarapipi, the statesman-chief of Ngati Haua of the Hauraki Plains and Waikato region wrote to Governor George Grey and pointed out to him the inconsistencies between his rhetoric and his actions. His rhetoric was about securing peace with the Maori tribes south of Auckland, and his actions included amassing large numbers of troops, and building a great road, which Tamihana said "pointed like a spear at the heart of Waikato". Tamihana was right: Grey's intentions were military and he successfully engineered the conquest of Waikato. The road remains, and still fulfils its function: insurrection in Waikato is unthinkable, despite 150 years of resentment of defeat and the economic and political submersion which it entailed. But now it is not seen as a military weapon but as a piece of economic infrastructure. Maori and Pakeha alike use the road for communication and transport. The power relations which the road was instrumental in achieving have become, if not totally accepted, matters of civil - not military- debate, and the existence of the road is no longer in question - indeed it is not even visible in political terms, except insofar as questions might be asked about its safety, its maintenance, its development, or its costs.

In "The Question Concerning Technology" (1977a, orig. 1949) Heidegger's anxiety about the Atomic Bomb is pervasive. Yet he describes in different, mellow, terms the existence of a bridge, "the old wooden bridge that joined bank with bank for hundreds of years" (Heidegger, 1977a: 16). It is hard to find any scepticism or anxiety at all about this bridge: here, evidently, we have an example of technology, which does not invoke the question of danger. This is consonant with Heidegger's tendency to romanticise the past - the "peasant does not challenge the soil of the field" (15) for instance, despite clear evidence from Africa, Ireland, the Dustbowl of America and other places that traditional forms of agriculture can create deserts and wastes which rival the effects of modern technology. But Heidegger seeks to position modern technology as something distinctly new and different from older forms of technology ("handwork"). In this I think he is mistaken. The gigantism, which he associates with America in the essay "The Age of the World Picture" (Heidegger, 1977b: 135, 153) may be new (or it may be a new form of Alexander's global self-delusions), but technology is not naïve or innocent just because it is in the past: rather it is the case that we are now accustomed to the technology of the past: it creates our present, we cannot think our present or our past in other ways, and so it becomes innocent, the alternatives being suppressed and unable to speak for themselves.

If we apply the same kind of historical imagination to this romantic bridge of Heidegger's as we have to Grey's road, perhaps it will become a different kind of bridge. There were undoubtedly people living on the edge of the water who made at least an occasional contribution to their living by ferrying people across the water, or warning when the ford was impassable. There may have been people on one side of the river whose market was destroyed by their customer's access to cheaper or better or simply different produce on the other side of the river. The minor lordling may have lost considerable power over his side of the bridge. The motive for building the bridge undoubtedly was a profit of some kind, whether financial or military, and almost indubitably implied a loss for someone else.

And yet, not to make such changes is, in itself, also a political decision and is just as likely to embed an existing set of political relations. There is no neutral territory here: the concealment of a possible technology, like the suppression of knowledge, is also an act with political and ethical implications. If the bridge is not built, perhaps the people on one side or the other starve, perhaps an oppressive landowner continues to exert feudal demands while on the other side of the bridge peasants sell their labour. So the story becomes one of change in general, or at least of deliberate change. Is change necessarily bad, or necessarily good, or is this not the right question to ask? These stones illustrate the nature of the suppressed violence in successful technology - or in the successful repression of technology. The stocking which does not ladder, the car which runs on water - these

may be urban myths, but they encapsulate an important understanding, that successful technology is related to the potential profits of the developer and marketer. The question, which applies to both implementation and suppression is, whose interest is suppressed? Whose assumptions are rendered concrete in technology? If a new law is under consideration it is usual for a debate, often heated, to be held on these questions. Even for some forms of technology_ a new motorway, nuclear power, and for some of the issues arising from technology - the disposal of toxic waste for instance, there has been debate. But there does not seem to be any such debate over the introduction of educational technologies. It is as if the answers to any possible questions are already there: education technology, as "handtools", makes education more effective: cheaper, more accessible, physically and socially - these are *good things* and the questions about 'in whose interests' and at whose expense', and to institutionalise what forms of power, or power/knowledge, are not being asked. So the questions about education as a technology are also not being asked.

Constructing the problem

Technology, after all, does not come from nowhere: it is a tangible answer to a problem, but it is at the level of the conception of the problem that the political intervenes (Peters and Marshall, 1993): the problem as Grey saw it, was the intractable nature of the Kingitanga movement. The answer lay in the technology of war. I hypothesise that the problem to the German princeling or mayor who instigated the bridge was lack of control over the people on the other side of the river, or perhaps lack of access to their resources. The assumptions concerning self-interest, the relative costs of labour in the production of goods, the need to dominate materially or militarily lie behind most Western technology. Social consequences are often unforeseen and unplanned: teenage texting, cybersex, the development of career possibilities for women as typists are not the motivating problems, which caused the development of the mobile phone, the Internet or the typewriter.

I do not argue that technology has, by definition, to be concerned with domination or profit (although it is difficult to imagine technology now coming to fruition without some sort of healthy profit in mind for the investors and producers). It seems to me to be possible, at least theoretically, that technology could be the answer to problems which are located in different questions: the Samoan umu which encourages the production of large amounts of food, to be consumed by large numbers of people is for instance a technological response to a question differently posed: the question of preparing and consuming large, often unpredictable, harvests of fish and crops in a way which supports the power of chiefs and the relations between members of families and villages, and which contribute to the positioning of families and villages in relation to each other. The importance of social relations, not profit is embedded in the question, that is, the *problem*, to which the technology provides the answer.

If there are hidden, obscured questions about power lurking behind the enthusiasm for various technologies, the urge to "unconceal" those questions may be what Heidegger means by "enframing ... that gathers ... together into the revealing that challenges forth" (Heidegger, 1977 a: 31). For to question, to "unconceal" these hidden assumptions, is to run serious risk in a political context where so much is invested in the notion that technology is itself the saving power.

Biopower

I open here the possibility of thinking technology differently, of thinking it not as a result of the will to financial or political power but as a result of a will to social and collaborative power. However, there is another problem (or perhaps another aspect of the same problem) in trying to think technology differently. Technology is closely linked in the European tradition with science, and Donna Haraway (1977) presents a convincing argument that the hostility of science to women, people of colour, and people of lower social class is not accidental but intrinsic. Haraway argues that

initially, "the exclusion of women and laboring men was instrumental to managing a critical boundary between watching and witnessing, between who is a scientist and who is not, and between popular culture and scientific fact" (Haraway, 1977: 33). She points out that the effects on those who are excluded from science for these reasons are profoundly disabling, that "to be the object of vision rather than the 'modest', self-invisible source of vision is to be evacuated of agency" (Haraway, 1977: 32). Our conception of science derives from historical experience, and this historical experience has been deliberately and systematically exclusive of those groups of people.

Consequently, science and technology are thought in terms which are narrowly located and exclusive of women, people of different colour, culture or class to those of the Western European middleclass male who is the paradigmatic scientist, so that the problems are distinctively conceived as the problems of that sort of person - as a side effect of the impact of liberalism and its preoccupation with the male subject - that situation which Foucault described as 'biopower' (see *The History of Sexuality* Vol I), without critiquing its masculinist tendency. Moreover, and as a consequence, the solutions to these problems are likewise conceived as instruments appropriate to the use of that sort of person. The enthusiasm for scientific or technological solutions to social problems can be read as an enthusiasm for a particular kind of solution which will, because of the assumptions of its practitioners (researchers, inventors, developers, investors), necessarily privilege certain manners of thought and certain groups of users. To move this idea a little further away from persons, one could talk about a kind of sexually inscribed "governmentality" (Foucault, 1991). In all situations, some form of 'biopower' will obtain. The characteristics of the dominant party may differ. It is the enlistment of rationality to the interests of a specific type/group/lifestyle and set of values, which makes the position problematic.

Relief or enslavement?

Marx was optimistic about the possibilities of technology becoming a relief to the position of the proletariat (e.g. in "The Economics" (McLellan, 1977: 386). This was a possibility, which has been realised in a sense, in that the use of the spade and pitchfork are no longer the daily lives of millions of people - at least not in the 'developed' world. But, because the problem may differ in some characteristics does not mean it has gone away. In terms of the use of shovel and cart, people have been relieved of much drudgery, no question, but because of the political context of the technology involved their position is, in many ways, little better. Moreover, as a result of the impoverishment of these workers it becomes ever more difficult to find markets for the goods thus more cheaply produced, so the imperative to find cheaper means of production, either by using slave labour or machines becomes intensified, in perpetuity. Competition is thus a technology of control.

The challenge to change

If such an objection to technological 'development' is sustained, then it constitutes a challenge to all change, including legal and political change. At best it could constitute the conservatism of Dr Johnson who would change the spelling of a word only reluctantly: "All change is of itself an evil, which ought not to be hazarded but for evident advantage" (Johnson, 1950: 126). This conservative position would tend then to enshrine old power relations as surely as the change enshrines new power relations. Consider the response of 'Finau 'Ulukalala', the Tu'i tonga or King of Tonga, to the explorer, de Surville who tried to persuade him to adopt a currency as a method of exchange and storage of value more convenient than feasting. 'Finau 'Ulukalala' foresaw that a currency would alter the relations between nobles and commoners: if the people could store their wealth in coins rather than in pigs or plants then the political and social relationships of Tonga would be fundamentally undermined. Nobles would lose their *raison d'être* as the means of redistribution of wealth.

Was 'Finau 'Ulukalala's decision good? The answer to this question depends on the standpoint of the reader, who may prefer traditional social organisation or may prefer 'modern' social organisation. It was a refusal of new power relations and a preservation of old ones. How does this relate to Foucault's notion of law as enshrined violence? Only that the previous laws were also previous violence enshrined. There is no clear place to stand, no innocent position, in which technology is merely a means to an end.

Technicising politics

Enthusiasm about technology does not come only from Marx, of course. Milton Friedman (1953), the great apostle of the New Right is equally enthusiastic about the possibilities of technical knowledge to emancipate people from what he sees as one of the greatest shackles of all: government and politics. For if politics can be reduced to a series of technical questions to which there are knowable answers, then politics as an engagement of people with different ideas becomes irrelevant. Friedman sees different political philosophies as simply differences over the analysis of the 'what is'. If these differences could be empirically removed, they would disappear. Everyone would agree on what had become a technical, rather than a political issue. An example might be the question of collective versus individual behaviour. Once economic science has firmly established which of these two is the most efficient form of human organisation: further discussion between 'left' and right' on this issue becomes redundant. Friedman does not discuss the values underlying his criteria: the test of 'efficiency' already presupposes that it is the relation' between effort (or labour) and profit, which forms the parameters of his notion of value. So his appeal to science, apparently so unbiased, contains a confident assumption that science will support his point of view (Friedman, 1953).

For the world of science, at least that world of science examined by Donna Haraway, is not just a world which eschews uncertainty. It is a world which ostracises all those form of being which it associates with uncertainty - women, people of colour, working-class people, non-European people, children, animals. So to move politics into economics is not just a move about switching from uncertainty - and possibly ignorance, prejudice, impatience into a world of certainty, science, logic, research, bur about switching from a world of uncertainty and unpredictability to a world dominated by certain values, predictable within certain parameters, but ultimately useless, sterile, unscientific because, as Friedman makes (unintentionally) clear, it cannot afford either a theoretical or an empirical engagement with that messy world of others. As well as pre-empting theoretic discussion by assuming that the parameters and values of neo-classical economics are universal, Friedman also manages to disable any appeal to empirical evidence as proof or disproof of his theoretical position. Whilst Friedman (1953) claims a Popperian basis for economics as science, he also claims that empirical discrepancies between economic theory and practical experience are not disconfirming instances, unless trained economists decide that they are, an exception which (although it discredits his claim to a Popperian form of science), renders economics impervious to empirical disproof. For Friedman, (and he is not alone), politics is evidence of an inadequate application of technology, for if the question is a political question, then the research which should answer the question 'scientifically' simply has not yet been done, and it ought to be done, in such a way that a certain answer is assured. By reducing politics to technology, the answer to the political question is predetermined.

The questions concerning technology and ourselves

If technology is political, and politics in endeavouring to become scientific is also political, then both are inescapably 'human activities', which are subject to the usual questions about means and ends, about purpose and ethics. And these questions have to be asked constantly in the light of the perception that science/technology tends to exclude rather than include marginalised groups. The

tendency of technical solutions to universality is itself a process of marginalisation. For instance, when the Internet brings education to distant islands or remote bays, it brings incorporation into the *techne* of current forms of biopower, and it renders even more marginal the cultures of its students. It may well be as unethical to deny distant students these possibilities as to actively recruit them: the tension remains.

New technologies, both of material and non-material kinds, constitute the political (and educational) bridges of our age: they join people, like teachers and students, in ways that seem at one level to be the simple answer to obvious problems. At another level there are those same hidden, obscure questions about power lurking behind the obvious. Surely it is our business, even while we are imbricated and perhaps precisely because we are so imbricated in the *techne* and technologies of our own world picture - to "unconceal" these hidden relations.

Note

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